**Project Based Learning: Publishing a Book**

**Goals:**

* Students will work collaboratively on the task
* Students will use technology to research and design a product
* Students will use technology to collaborate and present their finale project

**Standards:**

**Attend to Precision and Model with Mathematics**

**7. G. 1.** Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

**7. G. 6.** Solve real-world and mathematical problems involving area, volume and surface area of two-and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

**Scenario:**

You work for a publishing company. You work in the marketing department and must collaborate with the printing and packing departments to make decisions about how to structure books prior to printing.

You have recently been sent a book to prepare for printing that has 175,000 words and 30 chapters. The manuscript is a pre-teen to adult book. You get to decide the title of the book and who the target audience is.

You will work in groups of three to make decisions about how to have a book printed, wrapped, and shipped for sale. You will save your work in the class drop box to allow access by all members of your group to work on and save. There will be several phases to your project:

1. Research common fonts and font sizes used in books. Choose three fonts and font sizes, and then conduct a survey for a sample group’s favorite font and size for a novel. (Eligible groups to survey are the middle-school/high-school teachers, 8th grade class, 7th grade class, elementary teachers). To conduct the survey, survey monkey will be used. https://www.surveymonkey.com/

2. Research books, words-per-page, size, thickness, etc. Decide the dimensions of the book, and then you will figure out words per page, number of pages, book thickness, and possibly other characteristics of the book. Will you have a book cover? What size will the book cover be? How many words will be on the page where a new chapter starts? To help organize information excel tables will be used to help visualize comparisons of different book characteristics.

3. For packing, how many books will be shipped in a box and what size do the boxes need to be? What do you need to know about your books in order to figure this out? What qualities about books do you need to know in order to figure out book thickness including book covers and materials?

4. Lastly, you will design a book cover to share with the class and type up a paragraph, using the font in the font size you chose for your book, telling about each of the decisions you made concerning the book and why. You will also state the dimensions of the book, height, width, thickness, number of pages, how many books are to be packaged in a box, and the dimensions of the box.

**Extensions:**

1. Write a description of your book for the back of the book and for the inside flap of the book cover.

2. Draw illustrations for each chapter of the book.

3. Research production costs and projected revenue to be earned based on a projected sales price.

**Assessment:**

Phase 1: Students need to have completed the survey on font and font size. Students will submit their font selection and font size with a brief explanation of why they selected the chosen font and size.

Phase 2: Student notebooks will be graded at the end of each class that are to have notes taken on the research conducted on books. Students will submit copies of their excel sheets outlining the comparisons of book characteristics.

Phase 3: Students notebooks will once again be graded on research conducted on book materials.

Phase 4: Book covers will graded on ideas and neatness, paragraphs will be graded on completion of tasks (written with font and font size), and reasoning of font usage. Completion and accuracy of book characteristics: height, width, thickness, and packing elements.

**Questions:**

What do I know?

What do I want to know?

How many words in the manuscript?

How many words per page?

How many chapters? Do chapters affect words per page?

What type of paper to use and how does that affect thickness?

Paperback or Hardcover: how does that affect thickness?

What types of font do teens prefer? Adults?